REMARKS

This Amendment is in response to the Office Action having a mailing date of December 24, 2003. Independent claims 1, 8, and 15 are amended as shown. More specifically, these claims are amended to better recite distinctive subject matter. No new matter has been added. With this Amendment, claims 1-20 remain pending in the application.

In the Office Action, the Examiner rejected claims 8-9 and 13-14 under 35 U.S.C. § 103(a) as being unpatentable over Shiau (U.S. Patent No. 5,353,127), and in further view of a newly cited reference to Ishikawa (U.S. Patent No. 6,356,361). Claims 1 and 5-7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Shiau, in further view of Yamada (U.S. Patent No. 6,172,768) and Ishikawa. For the reasons set forth below, the applicants respectfully request the Examiner to reconsider and to allow all of the pending claims.

As previously discussed in prior-filed responses to office actions, one embodiment of the applicants' invention provides a method of approximation of the respective colors of pixels in a digital image. The approximation of colors involves the use of a correction term for the current pixel. According to an embodiment, the correction term is calculated based on the approximation error of a single pixel, immediately preceding the current pixel. *See, e.g.,* page 7, lines 7-9 of the present application. That is, the error of only a single individual pixel previous to the current pixel is used in the calculation of the correction term -- errors of other pixels adjacent to the current pixel are not used.

In the present Office Action, the Examiner has acknowledged that Shiau does not disclose the error value computed for a previous single one of the pixels. *See, e.g.,* paragraph 3, page 4 and paragraph 7, page 7 in the present Office Action. However, the Examiner has combined the teachings of Ishikawa with Shiau to continue to reject the applicants' claims. More specifically, the Examiner has cited column 6, lines 15-31 of Ishikawa as disclosing a method for computing an error value for a previous single one of the pixels. The applicants respectfully disagree with this interpretation of Ishikawa.

Ishikawa discloses an image processing method using error diffusion. An error correction term is calculated with the error term of one preceding pixel $E_{(x-1, y)}$, but combined (*see, e.g.,* column 6, lines 15-28 of Ishikawa) with a value I''_{xy} derived from the binarization

errors of a group of neighboring pixels (pixels of filter 22, except the one preceding pixel, as explained in column 5, lines 9-12 and 21-22 of Ishikawa). Therefore, it is clear that the error calculation of Ishikawa requires the <u>combination</u> of $E_{(x-1, y)}$ with I''_{xy}, and there is nothing disclosed, taught, or suggested in Ishikawa with regards to using the error of <u>only</u> one preceding pixel.

The claims in their current form are believed to be allowable over the cited references because they recite, using varying language, that the error value is computed for <u>one</u> previous pixel. The applicants believe that this language makes it clear that the error is based on the error of a single individual preceding pixel and does not involve combining other values with this error value, to obtain an overall error value as performed by Ishikawa. However, to facilitate prosecution, the claims have been amended to better recite the distinctive features.

More specifically, independent claim 1 has been amended to recite that the correction term is equal to a smallest error calculated upon approximation of <u>only</u> one preceding pixel. The addition of the word -- only -- makes it explicitly clear that only the error value of the preceding single individual pixel is used, and that no other values (such as the I''_{xy} of Ishikawa), are combined with this error value. As previously described above, Ishikawa teaches away from the features recited in claim 1 by using a binarization error only in <u>combination</u>. Accordingly, claim 1 is now further allowable over the cited references.

Independent claim 8 has been amended to recite that the correction term is also equal to <u>only an error value computed for a previous single one of the pixels</u> multiplied by a selected weighting coefficient. The terms "previous single one" of the pixels makes it explicitly clear that only a single pixel is involved and considered for calculation of the correction term. The addition of the word -- only -- further clarifies that only the error value computed for this individual pixel is used in the correction term along with the weighting coefficient, and that no other values (e.g., the I''_{xy} value of Ishikawa) are used to obtain the error value. Accordingly, claim 8 is now allowable over the cited references as well.

Independent claim 15 has been amended to recite that the correction term is based on a computed <u>error value of only a single one of the pixels</u> previous to the current pixel. Once again, the addition of the word -- only -- makes it clear that only the single individual previous

pixel is used in the computed error value. This feature is not disclosed, taught, or suggested by Ishikawa. As described above, Ishikawa combines the error term of a preceding pixel with a value I''_{xy} derived from the binarization errors of a group of neighboring pixels. Because this amendment to claim 15 clarifies that only a single previous pixel is involved in the error computation, claim 15 is now allowable over the cited references.

Adding the reference of Yamada to Ishikawa and/or Shiau does not cure the deficiencies of these references. Figures 6A-6C of Yamada clearly show that Yamada uses errors of five neighboring pixels, and does not use the error of only one preceding pixel as recited using varying language in the amended claims. Therefore, no combination of Shiau, Yamada, and Ishikawa can anticipate the use of an error calculated upon approximation of only one preceding pixel, such as recited in amended claim 1.

Overall, none of the references singly or in any motivated combination disclose, teach, or suggest what is recited in the independent claims. Thus, given the above amendments and accompanying remarks, the independent claims are now in condition for allowance. The dependent claims that depend directly or indirectly on these independent claims are likewise allowable based on at least the same reasons and based on the recitations contained in each dependent claim.

If the undersigned attorney has overlooked a teaching in any of the cited references that is relevant to the allowability of the claims, the Examiner is requested to specifically point out where such teaching may be found. Further, if there are any informalities or questions that can be addressed via telephone, the Examiner is encouraged to contact the undersigned attorney at (206) 622-4900.
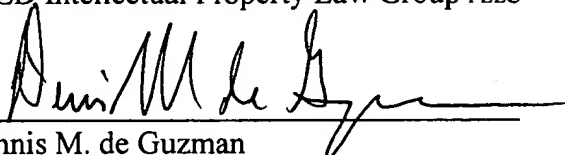
The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

All of the claims remaining in the application are now clearly allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,

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